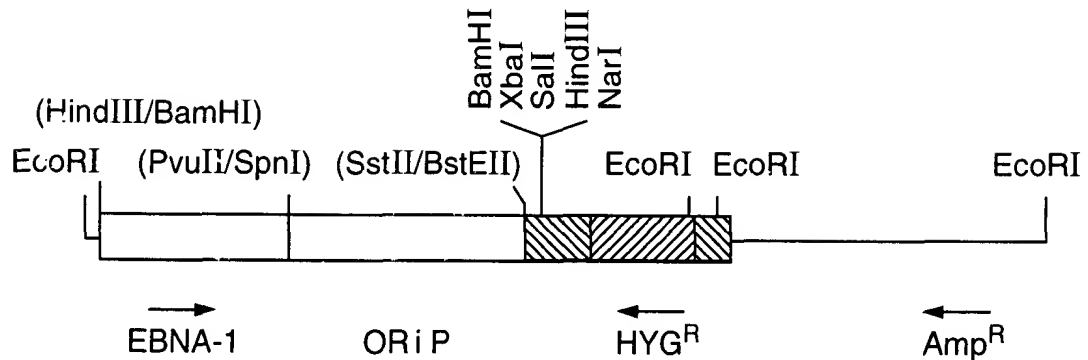


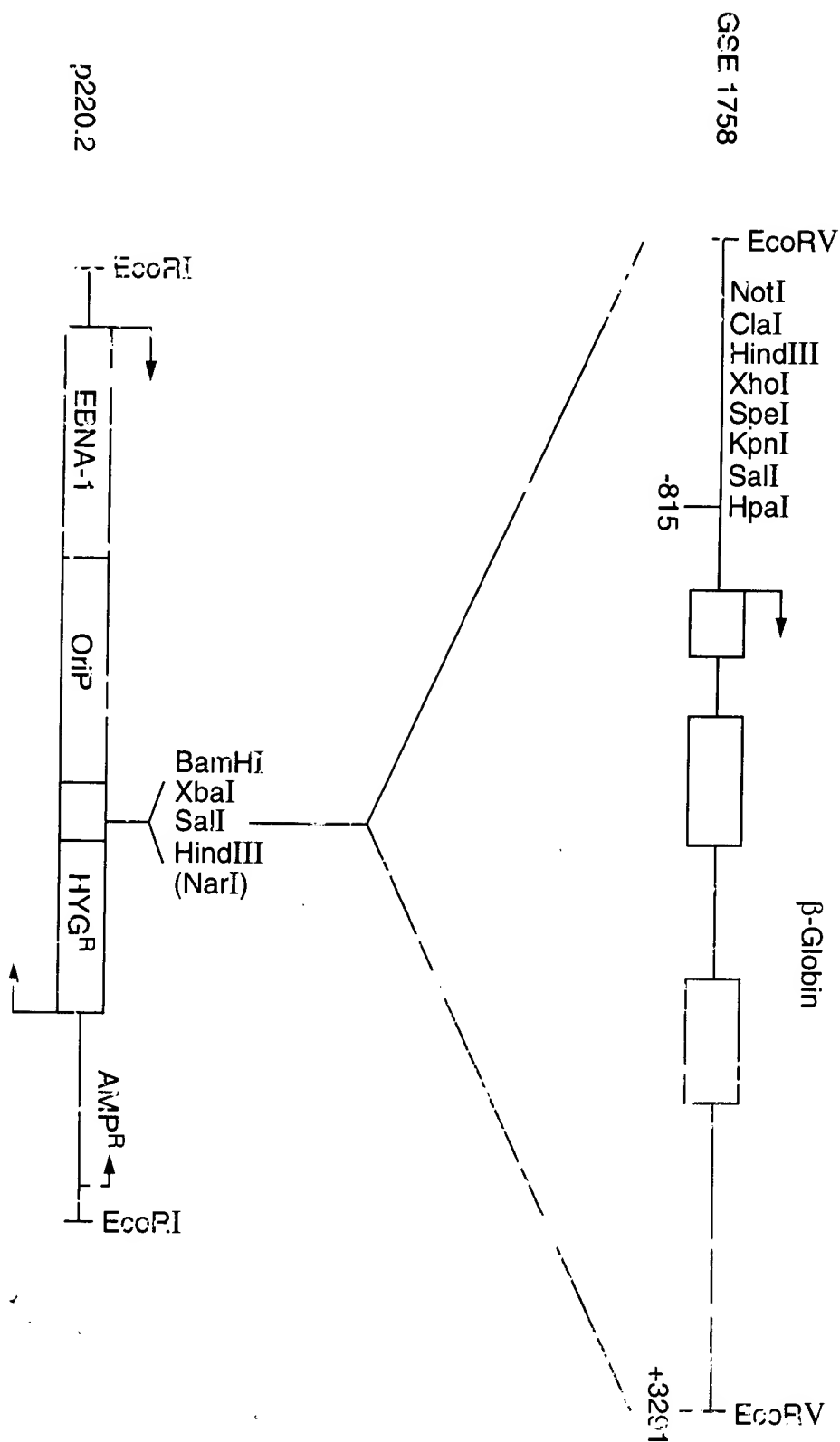
Application No.: 09/247,054  
 Title: Self-Replicating Episomal Expression Vectors Conferring  
 Tissue-Specific Gene Expression  
 Inventors: Michael Antoniou and Franklin G. Grosveld  
 Docket No. CACO-0045 Date of Filing: February 9, 1999  
 Atty: Doreen Yalko Trujillo Telephone No. (215) 568-3100

# FIG. 1



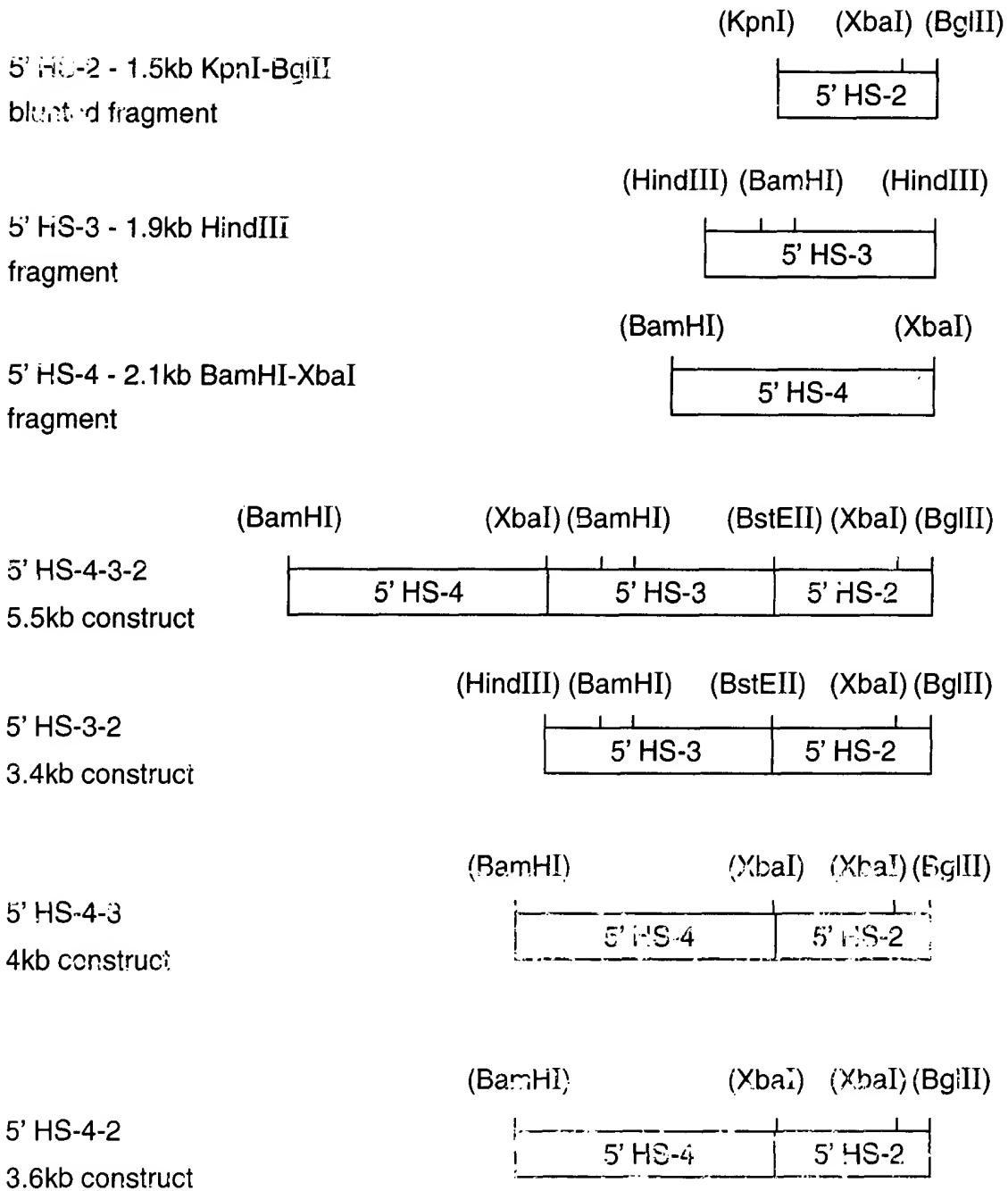
bp		
1-35	—	pBR322
36-2646	□	EBV EBNA-1 107567-110176 (Baer et. al., Nature 310:1984) Bam HI-PvuII fragment. Bam HI site was blunt-end ligated to the HindIII site.
2647-4826	□	EBV OriP 7333-9516 SphI-SstII sites blunt-end ligated to the BstEII site. (Sugden et. al., MCB 5:410, 1985)
4827-5460	▨	HSV TK regulatory region ( McKnight, S.L., Nucleic Acids Res. 8, 5949, 1980)
6488-6747	▨	PvuII fragment ligated into the poisonless pBR322 at NaeI site. These sites lost in cloning.
5461-6487	▨	HPH gene (Gritz and Davies, Gene 25:179, 1983) Ban HI fragment blunt-end ligated into the SmaI and BglII sites in HSV TK sequences.
6748-8952	—	pBR322 poisonless vector (deletion of 1.1 kb in pBR322) confers ampicillin resistance. (Lusky & Botchan, Nature 293:79, 1981)

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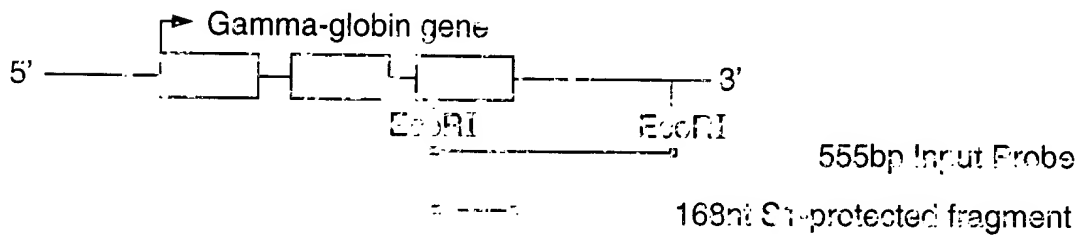
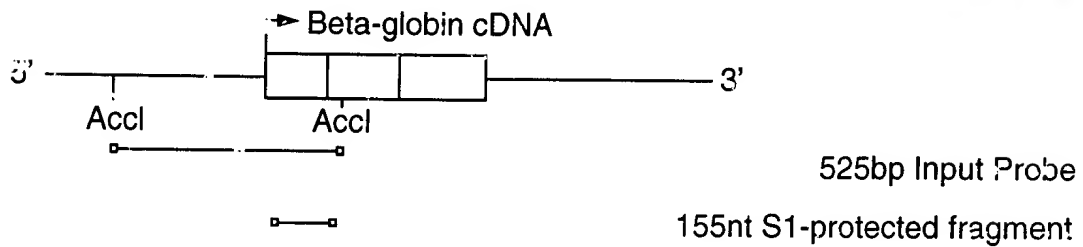
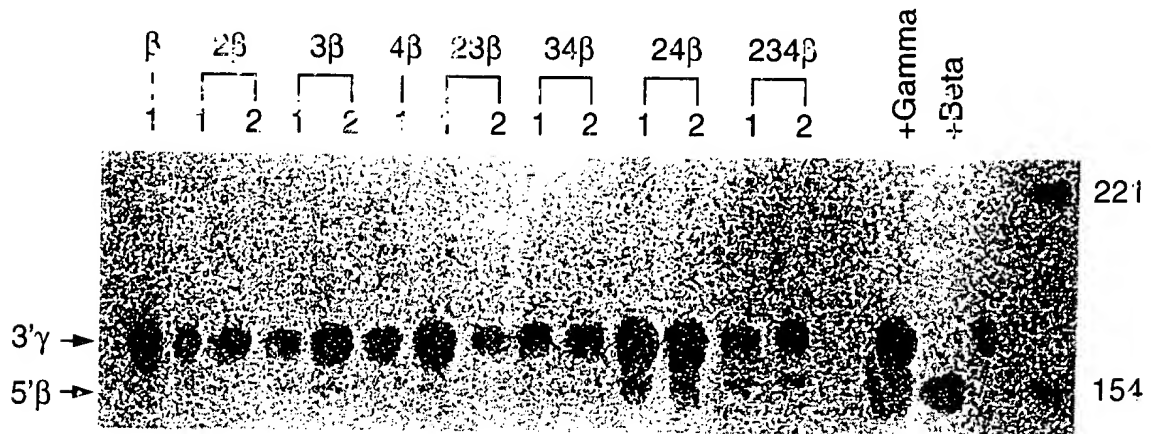
**FIG. 2**

# FIG. 3



# **FIG. 4**

S1 analysis of K562 cells containing human  $\beta$ -globin on an EBV based vector



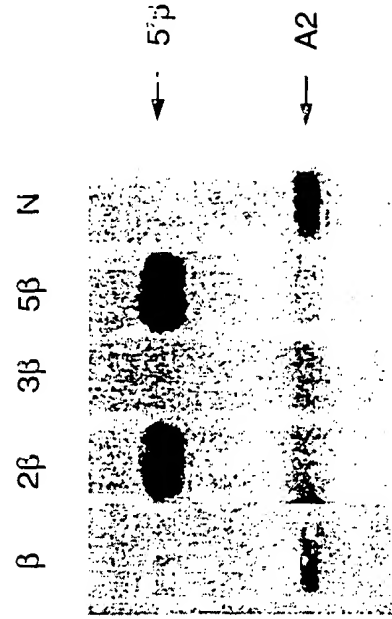
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**FIG. 5**

**A. K562**



**B. HeLa**



**FIG 6**

